

Remarks

Claims 16-35 are pending in the application. Claims 34 and 35 are newly added, and claims 16-33 stand rejected. Favorable reconsideration is respectfully requested.

Note is taken that the proposed drawing correction filed 6/24/03 was disapproved by the Examiner. Further, in response to the Examiner's requirement therefor, the amendment to the specification filed 6/24/03 is hereby canceled.

Claims 24-27 were rejected under 35 USC 112, first paragraph. In the rejection, it was contended that the limitation of "1.5R" presented new subject matter. Accordingly, this limitation has been deleted from claims 24-27. Withdrawal of the rejection of claims 24-27 is therefore respectfully requested.

Claims 16-17, 19-23, 28-29 and 30-33 were rejected under 35 USC 103(a) as being unpatentable over Schaeffer (US 5,073,971) in view of Rha et al. ("Rha") (US 5,365,571). To establish a prima facie case of obviousness under § 103, all claim limitations of a claimed invention must be taught or suggested by the prior art. See MPEP, Section 2143.03 and In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). In view of the foregoing authority, the Applicant respectfully submits that the cited references do not support the asserted rejection, as discussed further below.

Independent claim 16 relates to a wireless communication system comprising a cluster of base stations each defining cells, the base stations having sectorized antennae defining three generally hexagonal sectors within the cell, the sectors deployed according to a honeycomb pattern in a mutually interlocking arrangement and a frequency reuse pattern in which each frequency set occurs twice in a cluster of four cells.

Independent claim 21 relates to a wireless communications system comprising a cluster of four base stations, each base station having sectorized antennae defining three sectors within a respective cell. Frequency resources of the wireless communications system include six frequency sets and each frequency set is allocated to two sectors within the cluster of four base stations.

Independent claim 30 relates to a wireless communication system, comprising a plurality of frequency sets, and a plurality of cell clusters, each cell cluster consisting of four cells, each cell consisting of three sectors, each sector having one of the plurality of

frequency sets assigned thereto. The plurality of frequency sets are assigned to each cell cluster to create a frequency reuse factor of two.

In view of the above, the Applicant respectfully submits that the cited references do not support the asserted rejection for at least the reason that the references do not teach or suggest a frequency reuse pattern in which each frequency set occurs twice in cluster of four cells, where the cells are three-sector cells, as required by claim 16, nor substantially corresponding limitations in independent claims 21 and 30.

The Examiner acknowledges that Schaeffer does not disclose "3-sector cells as claimed" in claim 16. However, the Examiner contends that "it would have been obvious ... to apply the ... teachings of Schaeffer to Rha, for incorporating the ... 4 cells repeat pattern into 3-sector cells" (emphasis in original). The latter would be obvious, the Examiner argues, "[s]ince the use of a 3-sector cell would reduce the number of frequency allocations, and since the number of frequency allocations is subjected to the spectrum limit imposed by FCC regulations."

It is unclear what the Examiner means in the foregoing by "reduce the number of frequency allocations." Presumably an objective of the cellular art is to increase, not decrease, a number of frequencies available per cell. Schaeffer, in fact, makes this observation: "The number of cells in [a frequency plan] reuse pattern is a predominant concern of the cellular industry since this number determines how many different channel groups can be formed out of the frequency spectrum allocated to cellular radiotelephones" (col. 1, lines 63-68). Rha makes a similar reference to an objective of the cellular art through frequency reuse: "[i]n the frequency plan, frequency reuse is normally employed to achieve a system call capacity significantly greater than the total number of allocated channel frequencies."

Thus, if by "reduce the number of frequency allocations" the Examiner is referring to increasing capacity by frequency reuse, the Examiner has done no more than cite a general goal of the cellular art, recognized by both of the cited references. Moreover, it is noted that when presented with this same general goal, Schaeffer and Rha each proposed a different solution, and neither solution corresponds to nor suggests the present claimed invention.

It is further noted that "[o]bviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992); MPEP 2134.01.

Moreover, "[t]he mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." *In re Fritch*, 972 F.2d 1260, 1266 (Fed. Cir. 1992). Additionally, "it is impermissible to use the claimed invention as an instruction manual or 'template' to piece together the teachings of the prior art so that the claimed invention is rendered obvious ... This court has previously stated that '[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention." *In re Fritch*, 972 F.2d 1260, 23 USPQ2d 1780 (Fed. Cir. 1992).

In the present case, there is no teaching, suggestion, motivation, or desirability to be found in the cited references "to apply the ... teachings of Schaeffer to Rha, for incorporating the ... 4 cells repeat pattern into 3-sector cells" as proposed by the Examiner, nor is there any such teaching, suggestion, motivation, or desirability present in the knowledge generally available to one of ordinary skill in the art. This is evidenced by the fact that both Schaeffer and Rha recognize the general cellular industry goal of increasing capacity by frequency reuse, but neither discloses or suggests the claimed invention. It is only by recourse to the Applicant's own disclosure that the divergent solutions put forward by Schaeffer and Rha are pieced together in the manner proposed by the Examiner. However, as noted above, this is an exercise in impermissible hindsight reconstruction.

In view of the foregoing, Schaeffer and Rha do not establish a prima facie case of obviousness, and accordingly, claim 16 and claims dependent thereon are allowable.

Independent claims 21 and 30 were rejected for the same reasons as claim 20 was rejected, and thus, for the same reasons as claim 16 was rejected (see Office Action, p. 5, par. 4, and p. 6, par. 4). Accordingly, the rejection of claims 21 and 30 are

traversed along similar lines to those discussed in connection with claim 16: the Examiner acknowledges that Schaeffer does not show the structure recited in claims 21 and 30, and the modification of Schaeffer proposed by the Examiner is in no way suggested by Rha or the prior art in general. Claims 21, 30 and claims dependent thereon are therefore allowable.

In view of the above, withdrawal of the rejection of claims 16-17, 19-23, 28-29, and 30-33 under 35 USC 103(a) as unpatentable over Schaeffer and Rha is respectfully requested.

Claim 18 was rejected under 35 USC 103(a) as being unpatentable over Schaeffer in view of Rha in view of Brodie (PCT Pub. No. WO 9634505). Claim 18 depends on claim 16 and therefore includes its features. Accordingly, claim 18 is allowable over Schaeffer and Rha for at least the reasons discussed above in connection with claim 16.

Brodie does not remedy the deficiencies in Schaeffer and Rha. Brodie relates to a method of assigning carrier frequencies to base stations in a cellular radio telecommunications network, but like Schaeffer and Rha, is silent with respect to a frequency reuse pattern in which each frequency set occurs twice in cluster of four cells, where the cells are three-sector cells, as required by claim 16. Withdrawal of the rejection of claim 18 as being unpatentable over Schaeffer in view of Rha in view of Brodie is therefore respectfully requested.

Claims 16-23, 28-29, and 30-33 were further rejected as being unpatentable over Schaeffer in view of Brodie. The Applicant respectfully submits that the cited references do not support the asserted rejection for at least the reason that the references do not teach or suggest a frequency reuse pattern in which each frequency set occurs twice in cluster of four cells, where the cells are three-sector cells, as required by claim 16, nor substantially corresponding limitations in independent claims 21 and 30.

The Examiner acknowledges that Schaeffer does not disclose "3-sector cells as claimed," but contends that Brodie provides the disclosure absent from Schaeffer. In particular, the Examiner states that Brodie "discloses a frequency reuse method for 3-sector cells" and offers substantially the same rationale as that put forward in connection with Rha, above, for concluding that it would have been obvious to "apply

the ... teachings of **Schaeffer to Brodie**" (emphasis in original) to arrive at the claimed invention.

The Applicant respectfully disagrees. As noted by the Examiner, Brodie merely relates to yet another frequency reuse method. As discussed above, frequency reuse is recognized generally in the art, but none of the cited references, including Brodie, suggests the arrangement set forth in the claimed invention. Instead, it is only by reference to the present disclosure that the disparate elements of Schaeffer and Brodie are brought together in the manner proposed by the Examiner. Claim 16 and claims dependent thereon are therefore allowable over Schaeffer and Brodie.

Along similar lines, Schaeffer and Brodie do not render obvious independent claims 21 and 30, nor the claims dependent thereon. Withdrawal of the rejection of claims 16-23, 28-29, and 30-33 as being unpatentable over Schaeffer in view of Brodie is therefore respectfully requested.

Claims 16-23 and 30-33 were further rejected under the judicially-created doctrine of obviousness-type double patenting as being unpatentable over claims 1-8 of U.S. Patent No. 6,002,935. This rejection is respectfully traversed. The Applicant notes that the scope of claims 16-23 and 30-33 may change during prosecution, and that no indication of allowable subject matter has yet been offered by the Examiner.

The Applicant therefore submits that a terminal disclaimer will be filed to overcome the obviousness-type double patenting rejection(s), if warranted, when the Examiner indicates that, but for any obviousness-type double patenting rejections, the application is in condition for allowance.

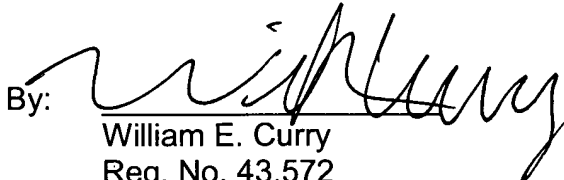
In light of the above discussion, Applicant respectfully submits that the present application is in all aspects in allowable condition, and earnestly solicits favorable reconsideration and early issuance of a Notice of Allowance.

The Examiner is invited to contact the undersigned at (202) 220-4323 to discuss any matter concerning this application. The Office is authorized to charge any fees related to this communication to Deposit Account No. 11-0600.

Respectfully submitted,

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